IRM USER magazine

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HELP-LINE

The User Group contains a great body of expertise amongst its members and the help-line exists to act as a channel for spreading knowledge and especially answers to your problems.

Remember, your problems are also our problems!

If you are in difficulty, please feel free to **ring anybody on the Committee** (see inside back cover). We may not, individually, know the answers, but we hope that we may know someone who knows someone who.....!

The Group is on **TELECOM GOLD 78:ITE001**
but *please* put as the subject: MAG 90380 - *this is essential*

Do feel free to write either to the Editor or the Secretary. This may be especially useful if the problem is complicated and non-urgent.

Advertising in the Magazine

Full- and half-page advertisements can be placed in the Magazine and details can be obtained from the Advertising Manager (address on Committee Page at back. We also take classified adds and members may place free adds for surplus kit in Micro-Mart, provided a valid membership number is quoted with the add.

Rates

Back Cover: £75 Inside Cover: £60 Full Page: £50

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These rates assume black-on-white, camera-ready copy. Please **avoid** dot-matrix output. Typesetting is charged at cost and is **additional** to the above rates. Classified adds **must** be pre-paid, cheques for £5 payable to RM User Group

The deadline for the next issue is January 26th 1990

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Editorial

In the expectation that this reaches you before 1990, may I wish all readers a Happy Christmas and New Year.

First of all, thanks to Graham Townsend for an enjoyable and successful Conference. Thanks also to him for the sterling work he is doing in organising the travelling server.

It is staggering that a few years ago we were amazed at a 20Mb server. Now 300Mb is hardly enough and various manufacturers produce machines with twice that capacity. No wonder our old 380Zs gather dust!

Can I encourage you to use the MicroMart to buy and sell. The Group receives queries about 2nd-hand PCs quite often, but what about reference books, software, etc. See what you can clear out during the Christmas hols!

In the last issue, there were suggestions for articles. Please get writing! I would be pleased to hear from members using **SIMS** for LMS on RM kit. How about members who are using the **NOVA** admin and timetabling suite. You can earn a crust writing - see page 37 for details.

If you are able to reply via email to any of the following letters, please send a copy to 78:ITE001 - but you ***must*** put MAG 90380 as the Subject - otherwise the email won't get through.

I have available some public domain clipart in .PCX format which can be doctored by PC Paintbrush or dropped into PageMaker. If you send me three formatted Nimbus disks and return postage I can let you have a copy. Some of it is pretty good, some fair and a bit useless - but worth the postage. There are some 300 plus images.

Has anybody done successful disk maintenance and organisation on a PC-186 hard disk using the sort of utilities found in PC Tools or the Norton Utilities? Please let me know.

Finally, please consider the advert on page 8.

Letters

From: *Dave Hupe, Chiltern Edge School, Oxon*

Help!!!!!

I am sure I have heard tales over the last few years of a device produced by and/or used by Suffolk (?)schools in place of the standard BNC outlet boxes for RM Nimbus network outlet ports.

If my memory serves me well it consisted of a box with BNC outlets which could be either bypassed or activated using a magnet. We are running a school-wide network with standard BNC outlets but... there are one or two areas which are vulnerable ie. often have their bridging cables disconnected. It would appear that the device I have heard tell of would probably eliminate this problem. If this device does exist could someone be kind enough to send me details of possible source and costs or even other alternatives.

If for no other reason than to save a poor overworked network manager having to do laps of the school and it's network in order to find a disconnected/un-bridged terminal box.

Thanking you in anticipation (and hope)

Dave Hupe

MICROSOFT WORKS

I would be grateful if anyone who is using thsi integrated package on an RM Nimbus Network could briefly let me know -

a) How user friendly is each part of the software?

b) How user friendly is the integrated aspect of the software?

c) Value for Money?

Would you buy this package again? Any other advice on the package?

Mr P W Palompo
Business Studies Department
Anderson High School
LERWICK
Shetland Isles
ZE1 0RF

01:YPR005 (Campus 2000)

Subject: Baud rate problems with WORD and printers

I have a PC 186 running Word 2 and Word 3 to either a Star NB24 10 or an Epson LQ500. With the serial Nimbus printer port set to 9600 Baud (which is the normal) and the printers set likewise, Word will report 'printer not ready'.. 'Y to continue ESC to quit' when the printer buffers are full. This makes printing long documents or doing a long 'mail merge' run impossible unattended as I have to keep waiting for the message to come up and then pressing Y.

I have got round this by reconfiguring the Baud to 1200 at both ends. Basically, the data is being fed slower so the printer does not seem to get the buffer filled because it's own speed of printing (and thus unloading the buffer) is fast enough. Surely WORD should be able to handle Baud at 9600. Whats going on?

If you can help, please contact Tony on 01:YNS020 (Campus 2000)

Dear Mr Bishop,

After a recent enquiry to Research Machines for information on a Link 480Z computer, I was given your address.

My queries were about disk drives and software (word-processing, finance etc) and would you have any information on these subjects, as RM do not manufacture material for the Link 480Z anymore.

I would in particular like to purchase a 2nd hand disk drive and would like software to perform simple word-processing, for letters and small reparts, etc.

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If you could be of help and put me in touch with other 480Z users, I would be very grateful,

Yours sincerely,

Ivor Rhule,
46, Ravensbourne Park,
Catford.
London SE6 4RW

Dear Robin Davies,

We have some PC2's with IEEE cards that we now wish to drive from a Pascal environment.

We were supplied with a manual for the IEEE from Basic but only a small collection of meaningless programs for use with Pascal.

RM no longer have any information on this product, although it is only 4 years old! It is suggested that there should be a manual that is no longer in print.

I need this information for one of my final year project students who is working to computerize a Michelson's Interferometer to explore Fast Fourier Spectroscopy.

Can you help with any information / contacts for driving the RM IEEE card from Pascal?

Yours sincerely,

Dr. E. Praulitis
Dept of Science
Bristol Polytechnic,
Coldharbour Lane,
Frenchay,
Bristol.
BS16 1QY
Tel: 0272-656261 ex 2471

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RM User Group

The independent association of users of Research Machines equipment

The User Group is looking for a

Publishing Editor

for **RM User,** to start in April 1990

Duties include:

Collection and editing of articles for the magazine

Design and typesetting

Arranging for printing

The Publishing Editor is a member of the Executive Committee, which decides the editorial guidelines for the magazine. Within these guidelines, the Publishing Editor has complete editorial control.

Benefits include:

Payment of a fee per issue, determined annually

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For further details, contact:

Ken Maynard,
Secretary,
RM User Group,
7 Wood Drive,
Stevenage,
Hertfordshire. SG2 8PA
Tel: 0438-354-809

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Library News

from Sheila Maynard

I have put below details of the Nimbus volumes currently available. Price and order details are available at the end. Members with 380Z & 480Z computers - and we have many - should remember that we have many useful programs for those machines. Contact me for details.

Volume 1:

Centec : some free-ware utilities provided by Centec
IBMPC : Turbo-Pascal graphics library and examples

Volume 2:

FAU:	a share-ware File Archive Utility
Menu:	a menu-generating system, by B.M. Taylor
QST2GRAS:	a BASIC utility to convert QUEST files to GRASS format, by Paul Bramwell.
JSH:	a set of utilities and libraries, mainly in Pascal, to perform various tasks, such as driving printers, providing help, driving comms, and assist in producing interactive batch files. Written by John Hollingum.
MANAGER:	a network manager's utility, by Paul Bramwell
FONT:	a font editing package.

Volume 3:

This disk contains two tried and tested programs from Anita Straker's work with MEP, OURFACTS and EXPOSE.

OURFACTS is a program already popular with Primary teachers on the Beeb. It is a program for database creation and handling. There are built in topics with suggested field headings from which the user selects the ones he/she wants to use. More confident users can enter their own topic and field headings. Up to 10 fields and 200 records can be entered, more than adequate for most class uses if pupils are collecting their own data.

The database can be inspected, one record at a time, selected records can be seen, and records which satisfy chosen conditions

can be displayed. Records can be edited. Values can be displayed graphically - pictograms, bar charts, pie charts and scattergrams are available. The display is clear and colourful and there are many opportunities to stop and discuss what is being done.

EXPOSE is a 'CLOZE' program, you may well have seen one of the many variations on 'Developing Tray'. There are several pieces of text provided on the disk and it is also possible to enter one's own text and save it on disk. The chosen text is displayed with the letters replaced by others generated by the computer. Thus the general shape of the words and sentences is preserved. The user then chooses a letter and enters the letter to replace it throughout the text. Any choice is accepted, right or wrong, but it is possible to 'Undo' a choice at any stage.

Text can be saved at any time, to be completed at a later time, it can also be printed.

Volume 4:

This volume contains EZSpell, Microspell and a demonstration version of Math Text.

These all run on the X-series machines and also on the Nimbus under SETPC.

EZSpell is a spelling checker which will check an ASCII file. It then gives you the following options:

ADD:	the word found can be added to the dictionary,
CORRECT:	you can enter the corrected spelling for the word and EZSpell goes through the document changing the spelling for you,
MARK:	the word is marked so that it can be changed manually later when more than a simple spelling change is needed,
IGNORE:	the word is left unchanged and not added to the dictionary,
PREVIOUS:	You can track back if you change your mind about what you want to do abut a word.

Microspell is also a spelling checker which will scan text files. The words found are stored on disk in a separate file. There are two utilities also on the disk, one will merge a text file of words

and the main compressed dictionary into a new text dictionary, the second will then create a new compressed dictionary.

Math Text is the mini edition which has some limitations but many people have found that it is sufficient for their needs. This is a text processor which enables documents to be produced containing mathematical and scientific expressions. A selection of printers is supported including common ones such as Epson RX, FX and RX.

Volume 5:

This contains three subdirectories of utilities which run on the X-Series machines and on the Nimbus under SETPC.

1	Back Scroll	buffers screen scrolling to enable data that has scrolled off screen to be recalled, it is bi-directional.
	Lockerup	locks the keyboard if you have to leave your machine on, simple key presses unlock it again.
	Super Typer	improved version of the DOS TYPE command.
2	Mpmprint	enables Epson FX, MX(with Graftrax Plus) and RX series printers to print 240 of the characters of the IBM PC character set.
	PRTSCFX	screendumps a text mode display on an EpsonFX or RX (not MX) - it looks like the screen display including connected line graphics.
	SIDEPRN	sideways file print filter, will print line-drawing characters sideways among other things.
	STOPWATCH	times the execution of programs.
	TIMEPARK	parks the heads of a hard disk after a specified time without any access.
	UASM	a set of BASIC programs which take the output from DEBUG and eventually produce an '.ASM like' source file.
	VF	a screen oriented file manipulation utility, it displays a screen of (up to 64) filenames. Wordstar cursor movement commands move the cursor to the desired file, then you can view, print, copy, delete etc with single key press commands.

	WAITUNTL	placed in Batch Files it enable the instruction to perform certain processes at chosen times of day.
3	CHK4BOMB	lists all ASCII strings & potentially dangerous disk activity in a suspect program.
	COVER	prints a sorted directory listing, formatted to fit into a 5 1/4" disk cover. It will accept a title. Epson control codes will select compressed print, 1/8" line spacing and 44 lines to the logical page.
	DS	a directory scanner, the function keys move the highlight from one directory to another, pressing <Enter> changes the user into the highlighted directory. Files can be tagged and the tagged files operated on.
	LIST	displays the contents of an ASCII file, line by line, with scrolling and positioning commands.
	QUICKEYS	increases the speed of response to the keyboard.
	WHEREIS	searches for specified programs and then can terminate the search when they are found. Saves the time taken going on through a full directory after the required program has been found.

Each Nimbus Library Volume costs £5, with an extra charge of £2.50 if you do not send a formatted 3.5" disk. Please make cheques payable to RMUG.

Backing up with a VCR

Introduction

How often do you back up the contents of your server's winchester? I suppose it all depends on what back-up hardware you use, how much spare time you have, and how well you have your conscience under control. Perhaps you back-up once a week, if you have a tape streamer? If, like me, you haven't, then the thought of all those hours of boring work and those dozens of floppies is enough to make you put it off until next week, or half-term, or ....

However, there is an alternative to a streamer. The Autofax "Imager" supplied by Microstorage Technology backs up your winchester on to videotape at a fraction of the cost of tape cartridges, and (assuming that you have a VCR handy) the hardware is much cheaper, too.

The package costs £185-00 plus VAT, and consists of an expansion board which plugs into your AX (or presumably VX) server, a pair of phono leads for connecting to your VCR, the software, and a loose-leaf handbook. When you order, you need to specify that it's for use with a Nimbus machine, for reasons which will appear in a moment.

Installation

The first thing to do is to fit the board to the server. The process of fitting an expansion board is well described in the RM manual, and needn't be repeated here.

Then the phono leads supplied are connected to the Video In and Video Out sockets of the video recorder. If your VCR is permanently installed, and you don't want to have to plug and unplug each time, or use a switch box, then you can fit a simple star of three 22 ohm resistors so that the Video Out can be fed simultaneously to the monitor and to the Imager board. The system seems able to cope with the resulting 6dB loss, and the process of backing-up is made that much easier. (In my experience, anything which makes backing-up easier increases the chance of it getting done!) An incidental advantage of this splitter is that you can watch the data on replay: it's about as interesting as the average television programme.

The next thing is to install the software. Run the server as a stand-alone,

and with the Imager disk in drive a:, type A:INSTALL. The batch file creates a directory called IMAGER and puts all the needed files into it. It will then enter a self-test routine to make sure that the Imager is working and connected O.K.

Actually there are two batch files. Use INSTALL if you just want the plain system (as I did), or INSTALLA if you want bells and whistles.

Testing

One of the early tests is to check whether there is a memory conflict, and in my case there was. This meant that I had to invoke XSETUP and reset the memory addresses for the EMS (from D0000H to E0000H) and the SUB-BIOS (from E0000H to 90000H).

Another check is for an interrupt conflict, and again, I was in trouble. My Imager board was supplied set to Interrupt 5, which in the AX/2 server is used for the mouse. There are two ways to deal with this: one would be to alter the mouse interrupt by changing a link inside the AX (in a rather inaccessible position); the other, simpler, solution was to realise that we would never need to use a mouse on the server, and so I simply disabled the mouse, again using XSETUP.

If you specify Nimbus AX/2 when you order your Imager, I expect that it could be supplied ready set-up for a different interrupt so as not to conflict with the mouse.

(These notes may seem rather frightening, but the whole subject is written up in the AX/VX handbook. All you need is two free periods and the server all to yourself.)

Having passed these hardware tests, the Imager then performs a short record/playback test to make sure that the VCR is ready for use. You, of course, have to operate the VCR switches accordingly.

Using the Imager

When all is checked properly, you can proceed with your back-up. The menu takes you through a series of options, which allow you to back-up the lot, or only selected files or directories. One of these options selects only those files which have been changed since the last back-up.

After a full back-up, the obvious next move is to verify the file images on tape. The menu offers this choice, which involves rewinding the vide-

otape and setting the machine to play. An interesting feature is that the system provides a read-out of "soft" data errors, which are converted into a figure of merit for the tape in use. As each byte of data is recorded four times over, the chance of an overall error in the final restore operation is very small indeed. The tape which I used was a 3M Professional E180, and this gave Figures of Merit of 90 - 95%. The README file states that a figure of 90% might lead to one error in 830 Mbytes of data; a reasonable risk to take !

If at any time you feel uncertain about the Imager's performance, you can run the self-test diagnostics by choosing the Special Options selection from the menu.

So far I have only used the Imager in its menu mode. It is possible to call its various functions directly from MS-DOS, in case you want to write your own batch files. One of the intriguing possibilities here is to set up the Imager and the VCR to do back-ups automatically at, say, 3 a.m. when presumably even a busy network has a spare half-hour or so.

Compatibility and Constraints

As the expansion board can only plug into an IBM slot, there's no chance of using it with a PC server. (Which means that I can't borrow it at weekends for my own Nimbus, dammit.)

Any video recorder can be used: VHS, Betamax, 8 mm, even N1750.

Tape economy is not a factor, so you should use Standard Play in preference to Long Play.

Good Points

Well made.

Inexpensive hardware and media.

Easy to use.

Needs no attention while backing-up.

As it's always the moving parts which give trouble when a piece of hardware fails, it's comforting to know that you can always replace the

VCR with another at a moment's notice.

Not-so-good points

It won't back-up hidden files. (If you have only the system files hidden, simply back-up these on to a floppy.)

It won't restore read-only files. This means that when a read-only file has been backed-up, the system won't restore it unless the original version on the winchester is set to R/W.

When a file is restored, its date is left unchanged but the time is reset to the time of the restore operation.

Back-up/Restore does not set the file's archive attribute.

I had trouble with "Revolver" from ILECC. Our version (an early one) was protected to prevent it being used on a stand-alone machine. They had included some null directories, which the Imager software didn't like. On checking this with the ITEM team, they agreed to send a more recent version of "Revolver" without this protection, so that it should now back up without trouble.

The maximum back-up capacity is quoted as 110 Mb, with no more than 6709 files and directories. The total number of files in any one sub-directory must not exceed 607, with a total of 32 Mb, and the maximum size for a single file is 16 Mb. None of these limits is likely to give me any sleepless nights.

The manual is not up-to-date, and you'll need to print out and study the README file.

Perhaps I'm being slow, but some of the screen prompts seem rather unhelpful. For instance, if you want to back up only some of the directories on your winchester, obviously you would not answer "yes" to the query "Back up all files ?". But when you come to Verify or Restore those directories, then you do have to answer "yes" to the same query, because this time it means all files on the tape, not on the winchester.

How long ?

The quoted speed of the system in minutes is (megabytes) + (0.1 * directories). Backing-up 28 Mb, in the form of 2517 files in 163 directories, took me about 45 minutes, which is about right.

Imager or RM Streamer ?

Some comparisons:	Imager	RM Streamer (CT60)
Capital cost (excluding VCR)	£185 + VAT	£895 + VAT
Tape cost	£5 for 110 Mb	£29 + VAT for 60 Mb

Supplied by:

Microstorage Technology
Trudos House
Heath Ride
Finchampstead WOKINGHAM Berks. RG11 3QJ
Tel. 0734-733414 (Speak to Gary Green, who has been most helpful.)

Jake Loddington, Queen Elizabeth's Grammar School, Blackburn

Editorial Footnote:

Jake has telephoned to say that the Revolver problem has been solved with version 4 which Imager will back up. Contact ITEM for the upgrade.

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Peter Bishop Associates
23 Larkfield Road
Richmond
Surrey TW9 2PG
United Kingdom

Telephone 01 948 4382

PBA

THE NATIONAL ENVIRONMENTAL DATABASE (N.E.D.) PROJECT:

A curriculum use for Campus 2000

In curriculum terms, Campus 2000 appears to be a solution looking for a problem with only it's E-mail component providing cost effective communication advantages when used correctly. With L.M.S. soon to redefine the battleground for the complex management of dwindling resources, the question of value for money looms for many school management teams. There is however, the optimistic development of the large scale investment by the D.T.I. and B.T. to not only put free modems and data phone lines into schools, but to encourage and develop their use. Good news perhaps, but such a 'technology led' approach could inevitably preach to the converted and simultaneously switch off the key workers we should be recruiting to a greater use of I.T. in the classroom or laboratory.

Apart from some notable exceptions, curriculum led uses for Campus 2000 have been rare. Breaking out of the 'pen pals' syndrome has been difficult and after all, if giving pupils the chance to communicate with other schools was to be encouraged, why hasn't the telephone and the letter been used more. The National Curriculum is now an influence that demands a further and more systematic appraisal of the facility. The teaching of certain skills and processes could be met with much more confidence if a curriculum model for Campus 2000 could be provided, especially in the difficult areas of constructing cross curriculum teaching materials.

The N.E.D. project is a major new curriculum initiative currently being developed at the 'Centre for Educational Studies' at King's College London. It provides the resources to support an Information Technology contribution to good environmental education and is aimed initially at Key stages 3 and 4. The project centres on collaboration between schools on environmental surveys and investigations by the use of an interactive database on the Campus 2000 system which is used to exchange database files created locally.

The first phase has been trialled with the use of RM Nimbus PC 186 machines and the 'KEY' data handling package from GSN software (supported and distributed by the ITV Association). 'KEY' was developed as a BBC data handling package and is used by many schools with an investment in the Acorn product. Its implementation on the Nimbus seems less than perfect with its complicated data file structure designed

largely to cope with the limited memory and storage of BBC hardware, something that is clearly not a problem for the Nimbus. An IBM version is due next Spring, purporting to work in 'Windows', which should overcome the problem inherent in 'KEY' of having only one 'graphic' available when you need the all important comparative view to test a hypothesis with the data. A Nimbus 'Windows' version could follow. It is thought that it will be configured to the major E.C. languages, not surprisingly as most machines in European schools are IBM's or compatible clones.

The project began as a way to satisfy needs expressed by many science teachers. They were firstly, to be able to collect data from real environmental experiments and go beyond the often limited objectives of teaching 'techniques' and secondly, to be able to make discoveries rather than do demonstrations and so make a real and reasoned contribution to the often ill informed debate on 'green' issues. To collect data about, say, the pH of rainfall or the level of background radioactivity from a small group of sites in or near a school in order to test hypotheses through database examination, will hardly provide sufficient information to avoid resorting to the usual sources of data at second hand. What is needed is a national classroom.

The nearest we can get to this at the moment is Campus 2000. If the pupils environmental data can contribute to a National Database or can be rapidly compared to data from a similar investigation done elsewhere in the country then we are getting much closer to satisfying those teacher needs described earlier. Whilst data from any investigation can already be E-mailed to any mailbox, it can't be much use for a data handling exercise unless it can be retyped into database software soon afterwards, a limitation likely to guarantee that the data will get no further than being read from a printout. The E-mailing of 'delimited' data for later 'appending' into an empty datafile structure, is easy enough for the users of commercial packages but then most schools are excluded from this possibility by the rarity of such expensive and/or unfriendly packages in classroom use.

We are faced with the limitation on being able to exchange only ascii text on Campus. The sort of control codes embedded in most database files especially 'KEY' or any 'FIF' format will give Campus terminal hiccups if you attempt to upload it. The NED project has created the software that can overcome this technical problem. ENCODE.COM will offer you a 'KEY' look-a-like screen in 40 columns that puts any datafiles on your disk, into a menu. From a 3 key operation (well known to users of 'KEY') a file can be selected and then given a target name e.g. Acid Rain or Radon

(to link it to the appropriate menu branch on Campus) and a unique identity (The school's Campus I.D.) to enable data seekers who log on later, to differentiate between sites of data origin. All registered schools must eventually sign an agreement to allow their own I.D. (not password), address and description of their site. e.g. rural, urban etc to be posted in a downloadable data file like any other. When this simple selection is over, ENCODE.COM gets to work encoding the 'KEY' data file into a simple yet clever 'generalised' form in which control codes are stripped out yet their functions recorded in a readable header. The result is a file that can be sent to Campus once the system prompt (Option 8) is selected.

In the popular Nimbus Comms' package 'Contact', selecting F4 and the 'unchanged' option and then selecting this encoded file (called send.tns) from the directory list, will do this. Send.tns (the data file) starts scrolling up the screen and up to the Campus computer.

A user that wants to download a file is guided through the procedure from the NED 40 column colour menu on the screen. Access to this menu is provided by simply typing nede at the system prompt on the Campus menu, (Campus-Plus is not required).

'Contact' can be used to save a file 'unchanged' to disk and as long as you have named it receive.tns, a second piece of unique N.E.D. software called DECODE.COM can reverse the sending procedure to convert the file back into a 'KEY' data file. Downloading is swift at 1200 baud and on line time reduced to a minimum. Decoding the file, with it's complex error checking, takes longer but it is done off line and it can be unattended.

Many useful data files can be yours for a few pence for use in a situation where database principles are learnt for a reason rather than as an end in themselves. It is amazing how mutual ownership of real data can motivate where abstract catalogues or census type data seems to fail. This can happen now for any school with a Campus subscription at no extra investment. It does not exist on someones 'wish list'. It is not waiting for that hypothetical hardware and comms' system that is always just around the corner.

Perhaps more importantly than this, the N.E.D. system creates a 'clearing house' to organise a system of data traffic that might have a varying number of participants at any one time. There is also a need to make decisions on the quality and quantity of data available at different times of the year. It can also act as an umbrella under which teacher sponsored projects could have a focal organisational point.

A BBC micro version of the software is now available and a version to transfer data to and from Nimbus GRASS files and more importantly, between KEY and GRASS files via Campus, is under development. However, we are now looking at the possibilities of giving access to IBM clone hardware as this will enable some European schools to participate in the data exchange program, a development of great interest to school language departments for collaborative work with Science, Geography and Maths.

There is no reason why some N.E.D. materials could not be used in secondary Humanities lessons or in Primary schools. The National classroom could become the global classroom or at least that part of the globe with access to dialcom facilities. Even the incompatible French Minitel system can be overcome, or should I say collaborated with, in time.

If you would like more information about the project or would like to participate in trialling materials before it's formal launch at the A.S.E. conference in January 1990 or you have a proposal for using the system for a collaborative project with schools you have contacts with, then please contact Tony Hill on YNS020 (Campus 2000) or if you are not yet confident with the system...

The N.E.D. Project
Centre for Educational Studies.
King's College
552 Kings Road
London SW20 OUA

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The Server

By the time that you read this, RM will have increased the capacity to 300Mbytes. Much of this space will then have been filled with software from all curriculum areas. I will then be able to concentrate on producing some documentation on what is available. I will also be able to take the server to more venues.

Many places are now looking to the server as a means of providing some form of IT in-service provision; others are using it as a vehicle for providing links with schools within their locality, whether they be Secondary or Primary, or indeed private sector. If you could use the Server please contact me and I will give you more details. Apart from the AGM I am hoping to set up a day particularly geared towards primary schools.

If you have produced some software which is of value to others or you know of good software which deserves to be on the server please let me know. I hope to produce a simple list of all software so far installed in the next journal.

Graham Townsend

Healthdata

This health information viewdata system is available for the RM Nimbus. More than 400 pages of up-to-date health information are linked with a simple menu-driven structure. The display software gives Healthdata the "look and feel" of accessing an on-line database. Healthdata is useful across the curriculum and is particularly relevant to Human Biology, PSE, Child Care, Health Education and IT. The database is used in secondary and further education as well as in adult literacy. Correct terminology is used throughout and in every section advice is given on where further information can be obtained. There is a help section and a comprehensive index.

Stand-alone version £14.95 Network version £28.95 post free no VAT

A Primary Healthdata for 9-12 years is available from January 1990.

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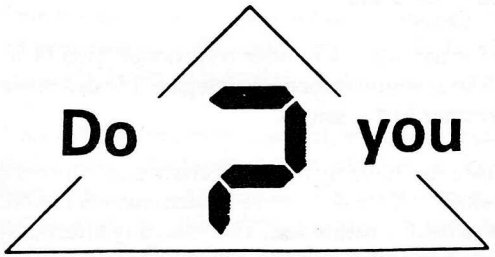

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USER GROUP CONFERENCE 1989

This year's Conference was held from Friday 20th to Monday 23rd October at the Penguin hotel Daventry.

As usual we were very well supported by Research Machines and particularly by Technical support, Pre-Sales Support and by David Hay.

This year we were also greatly helped by Barry Newman and his staff from Northamptonshire. I am certain that all present this year would echo a large thank you to them all.

The conference format was as is now traditional: two (4 by 1.5 hour) courses plus a 1.5 hour seminar for each delegate. We did however extend the dBASE IV seminar to 4 sessions.

I hope that all delegates have by now had chance to impress others with their new found skills! All sessions were almost entirely HANDS ON, and with clear sets of notes for future use. The Saturday afternoon was taken up with a software fair with a number of software and hardware stands.

On the Friday evening Mike Rumble introduced the *Cars in Motion* competition and even RM were keen to enter a team. In the end they relented under pressure and allowed the team to be entered under the pseudenom COLIN WATKINS, was it because the venue was to be Dijon?

On Saturday Chris Jennings rushed over from the NEC to give a very interesting demonstration of *Art and Time* on the new machines. The Sunday night had to be the highlight of the whole weekend. We began with the *Cars in Motion* final. I will not embarass the teams by announcing the result. Colin did finish well but unfortunately he did not win - despite the whole of Technical Support being seen on their knees around the gateaux trolley taking in extra last minute supplies! However the race was full of incident, particularly with *Freddy Teddy* car making a tactical pit-stop on the penultimate lap. A bottle of Champagne was presented to the winners by Mike Rumble on behalf of *Cambridgeshire Software House.* Unbelievable as it may seem to non-attendees the evening became even better.

The *Music Maestro* slot was a brilliant demonstration as to how the capabilities of computers can be thoroughly demonstrated without being in the slightest bit boring for the less technical. Russell Prue of RM and Paul Knappett from Northamptonshire combined to show the full capa-

bility of the AX and VX musically. (I have since seen the same software working on the M Series using the new midi card). Russell assumed the role of Technical Wizard and Paul, who is a very accomplished musician, showed some of the musical capabilities. They more than adequately proved beyond any doubt that the Nimbus can easily more than match the capability of other computers in Music. If the demonstration is ever repeated by these two gentleman make sure that you do not miss it!

Future conferences: The following questions need to be answered for future

1. How many people can obtain the funding necessary? It will not drop below £200 if we continue using hotels.

2. If we continue to hold the conference at the same time of year we must use hotels as other venues are full. Hotels could also be claimed to give us a more professional type of conference.

3. Do we use the same venue for more than one year - ie if the venue is good do we go back next year, providing the price does not go up a large amount?

4. What courses do we run?

5. How do we attract more participants, especially with LMS around the corner?

6. Do we link with other groups in order to provide an alternative type of conference?

I hope to organise next year's conference for the same weekend next year. If you are thinking of coming please write and let me know your views in order to help with its planning. I realise that this year's arrangements were quite rushed for various reasons, but hope that this early warning will help with funding pleas.

Graham Townsend
Conference Organiser 1989

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First Choice V3 (1MB Nimbus PC186, and IBMs). Integrated software for Word Processing / Spreadsheet / Database / Graphics / Slide Presentations. Ideal for RSA CLAIT and Stage 2 etc. In addition, we supply free of charge, a utility disk to convert your Grass, Key, Quest files etc. to First Choice format and two 1851 Census databases to get you started. First Choice will import data in a variety of formats including Microsoft Word and Wordstar. Educational price only £75.00!

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Please send further details of the following Hardware/Software.....

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Our computing department uses Nimbus PC186/PC286/PC386 / AX / VX / Amstrad / IBM Compatible hardware.

Name: .....

School/College.....Position.....

Address.....

.....Post Code.....Tel.....

News from the world of RM

Since the last issue of the magazine RM have been releasing a whole string of bits & pieces of news concerning themselves, systems, software and much else. There follows a synopsis of most of this. We list a contact name / number if that is not RM's Sales Desk.

RM News

Cornwall LEA have ordered £60,000 of X series pcs for LMS. Quite a number of LEA's are putting RM kit in for LMS work and educational admin.

RM is sponsoring a Chair of Education at Keele University by supplying pcs valued at over £75,000. The post of Research Machines Professor of Education is held by Tim Brighouse, former Chief Education Officer of Oxfordshire.

At the Educational Networks 89 - at Newman College, Birmingham - RM launched RM Net 3. This major operating system upgrade will be mentioned in greater detail later.

RM have produced two booklets of interest to schools. Firstly, on the role of the Nimbus in Primary Schools and, secondly, on Desktop Publishing in Schools. Contact the Sales Desk if you would like copies.

Customer Support facilities now fall into a number of clearly defined functions with their own numbers as follows:

RM Technical Support Hot Line:	0865 796197
Consultancy:	0865 796878
Bulletin Board:	0865 796431
RM Cabling:	0865 796830
RM Service:	0865 796111
RM Training:	0865 796125
RM Customer Support: Fax	0865 796893

Bulletin Board users have topped 260 and RM have installed a second port allowing a second line of communication. Both lines are dialled on the same number - 0865 796431.

New editions of key RM publications are now available.

A special schools edition of the RM Product Catalogue contains details of everything of relevance to secondary schools. For primary schools, a new version of Primary Choices buyer's guide is also available and can be used in conjunction with or instead of the RM Product Catalogue for Schools.

A new edition of the PC-186 Directory of Educational Products and Suppliers - with over 1700 entries - is also now available. A special version of the Directory for Primary schools - with 200 copies - will be available soon.

System News

Don't manufacturers get bogged down with the way they describe their ranges! RM are doing their best to either confuse us or clarify things. So, we now have the M Series used as the generic name for the IBM PS/2 MCA compatible PC-286 and PC-386 systems. Apparently, this change is needed in order to distinguish them from the PC-186. Don't forget the X Series.

It was disappointing to read, about the M Series, that the 40Mb models are being replaced with 30Mb models - at the same price. The argument is, apparently, that supplies of 40Mb disks are unreliable. This is hard to accept, as such disks seem to be available to all other manufacturers.

RM have pointed out that not all PC-186 floppy disk upgrades can be performed by the user. This is because the older system had a different sort of drive, now no longer available. Old machines have a serial number prefix in the ranges 1/ to 44/ or 47/ to 48/. The drives are full height brown drives. If you think that you have an older drive, contact Technical Support for advice.

The good old AX-286 based turnkey desktop publishing systems have been replaced by M Series PC-286 systems. Prices range from £4095 to £5150, dependant upon the type of printer. RM have replaced the Qume Scripten Postscript printer by the Qume Crystalprint Publisher. On the face of it, they are the same in the job that they do - although the technology is very different. However, there have been reports about font incompatibilities with image typesetters.

The same situation is true of the AX-286 Desktop Painter, now replaced by the M Series PC-286.

M Series Turnkey CAD systems have been released, based on AutoCAD 10. Prices range from £2599 to £3299

The introduction of the M Series has led to various changes in the X Series systems. For example, reduced prices for an AX-286 40Mb, 19" monochrome screen. This comes out at an education price of £2395.

287 and 387 co-processors have been dropped in price, by up to £174.

RM Net 3

This major advance will be available from January 1990. I hope that this is not RMspeak for March! This development is going to offer advances to all users of RM Networks and offers:

support for RM's latest M Series

support for PC-186 and X Series

an expanded range of X Series servers offering 60Mb, 110Mb and 300Mb

support for Z-Net is enhanced by optional support for RM Ethernet

server support for up to 4 separate cables

performance improvements through MSDOS V4, the freeing of memory on all micros, improved management facilities and greater system security

single printer queue supporting up to 3 physical printers with queue management

upgrade paths for all users of earlier RM Net versions

a new range of RM Netpacks

a range of Option Packs.

As always, the Educational Software Library, free technical support, a 1-day network manager's course, 3-year hardware warrantry and a 1-year on-site server maintenance warranty, is available to purchasers of RM Net 3 servers.

VX-486

RM have launched a fast 80486 25Mhz machine in the X Series. It is claimed to operate at twice the speed of 33Mhz 80386 systems.

AX/VX MS-DOS v4 Upgrade

This is available for MS-DOS 3 users on stand-alone machines at a cost of £70 for standard users (non-education) and £49 for education users.

Printing Made Simple

This booklet has been written by RM's Technical Publications team and is a practical guide to printing from RM Nimbus microcomputers. Contact the Sales Desk for a copy.

Support Packs

These are very like RM's TechPacks, but are ordered by sending a cheque for £9 (plus VAT) directly to RM Technical Support. The first Support Packs are listed below. Documentation where applicable is to be found on the disk.

Support Pack A2

PC-186 BBC Basic(86) Software Development Utilities

This disk contains a number of BBC Basic(86) sample programs, developed by software developers and vendors involved in converting BBC Basic applications from Acorn machines:
printer screen dump; screen load and save to disk; many graphics routines.

Support Pack A3

EMS 4.0 for AX.VX Series

This is an upgrade for users of EMS 3.2 on AX.VX Series machines.

Support Pack A4

Windows 2 Cobra Drivers

These are Windows 2 drivers for the Cobra high resolution 19" colour

graphics card which comes as part of the optional High Resolution Colour Kit (Order Code 018-007) for AX/VX machines.

Support Pack A5

Viking/Moniterm Drivers

These are high resolution Viking/Moniterm drivers for Windows 2.xx and Windows/386

Support Pack A6

Additional Microsoft Word Printer Drivers for v3 only

Support Pack A7

Additional Windows Drivers

These are suitable as an upgrade to drivers for users of Windows 2.03

Applications News

RM now sell *MicroGrafx Designer v2* at an educational price of £299

Windows Draw has been replaced by *Draw Plus* and costs £120

Word 5 is now available at the following prices:

Stand-alone: £158

Network: £474 (5 users)

£790 (10 users)

Upgrades from v4 to v5 are dealt with directly by MicroSoft and price depends upon when you bought v4.

Superbase 2

A "sophisticated Windows database". Pull-down menus, requester panels, check boxes, multiple windows. You can integrate scanned photos and drawings. All the usual database facilities.

Single user version available from RM at a cost of £120

16 user version will be available from January and will cost £495

ILECC have been extending their excellent range and to list them all would take too much space. You should telephone them on 01-735-9123 for a catalogue.

Free programs!

2 Post Office Programs called *Moving Targets* and *Allsorts* have been developed.

Moving Targets has been devised as a teaching resource to introduce and reinforce how and why a business works, and is amied at 14-19 age group.

Allsorts is a program for 9-14 year olds and uses Venn and Tree diagrams to help children solve sorting programs.

Contact:

Post Office Educational & Information Services, Royal Mail House, FREEPOST, 29, Wellington Street, Leeds LS1 1AA

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Micro-Mart

For Sale:

Nimbus PC-186, 1.5Mb; Double Drive; Mouse; 18 months old; private use; excellent condition; lots of software.

£700 o.v.n.o

Terry Brown
PearTree Cottage,
Saltby,
Melton Mowbray,
Leics
Tel: 0476-860335

Wanted:

PC-186 20Mb hard disk machine

Juliette Surridge
Tithe House,
High Street,
Long Wittenham
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086730-7803

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Writing for the Magazine

Please do! All contributions are welcomed and most are published, subject to editorial requirements. Your contributions should be sent on disk from any RM machine and it may be helpful in some cases to include a printout of the article. All disks are eventually returned!

One of the greatest needs is for suitable illustrations, but these need to be disk files which can be transferred into *Aldus PageMaker*. *Windows Draw!* pictures are the best, but *PC Paintbrush* pictures are acceptable. If you want to send in graphics from such as PAINT*SPA* or NEW*SPA*PER, please print out with a new ribbon so that there is some chance of making camera-ready copy. Good black & white photos are great.

For those who would really like to help the Editor and are using a Nimbus and either *Microsoft Word* or *Windows Write!*, please format your text in 10 point Palatino. When using *MS Word* you will need to select a postscript printer (Apple laser) from the Print Options menu. Do **not** use a style sheet (for various reasons!)

If you are using, say, *WordStar* on a 380Z or 480Z (*and why not*?) then do it as a non-document file. I cannot read BBC disks , but you may be able to email me on 78:ITE001, but please put - as the Subject - MAG 90380. PageMaker 3 files on Mac disks can currently be read.

Don't be put off by any apparent technical depths in material you read in the Magazine. We *eagerly* welcome simple, straightforward stuff from novices for novices. There is no minimum length, either!

If you've an idea, but are uncertain as to its usefulness, please drop me a line or ring me.

We are very keen on any material concerning BBCBASIC-86 and the running of BBC programs on the NIMBUS PC-186.

Articles/letters about your experiences with RM, their kit and service are welcome, as are the same about other vendors of hardware or software for the RM range.

We will now pay you £5/page of text. Sorry, but for graphics, listings, etc., nothing. All payments are at the Editor's discretion.

Deadline for the next Magazine is January 26th 1990

Membership Form

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NE12 0SA

Signed _____

1989

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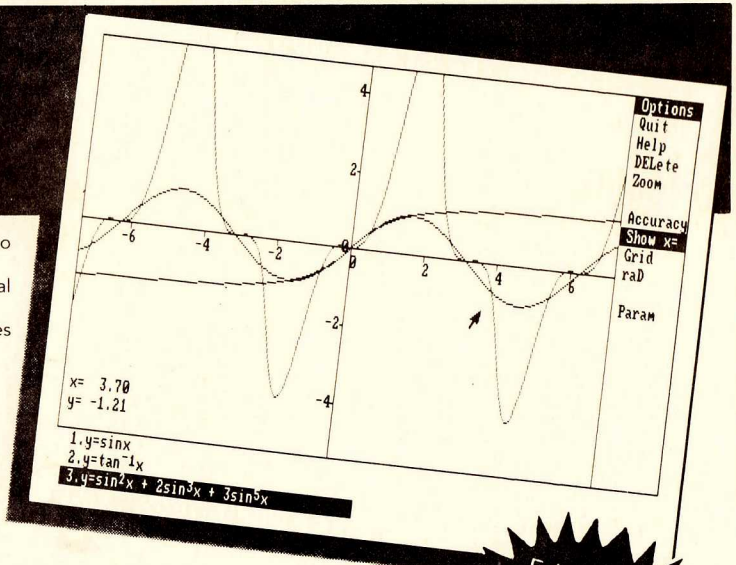
Omnigraph
– the graph processor



Omnigraph is a graph processor which is exceptionally easy to use yet incredibly powerful at the same time. *Omnigraph* allows you to enter the equations of graphs using ordinary mathematical notation; to plot graphs to the accuracy you choose; to perform transformations on graphs and other shapes; to graph derivatives and integrals; to solve differential equations; to construct graphical diagrams – and allows a host of other graphical activities.

Equations are entered into *Omnigraph* just as you would write them. Just type in equations like:

$$y = x^2 - 2x + 3 \quad \text{or} \quad r = e^{\pi\theta} \quad \text{or} \quad y = \pm\sqrt{x}$$

You can build up demonstrations step by step, and then display them later – and your students can see your handiwork step by step as well.

- User interface exceptionally easy to use.
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- Full set of transformations can be applied to any curve – or to the whole screen.
- Show graphs of gradients and area under a curve.
- Show the 'compass point' solution of a differential equation, and solution curves.

Educational Technology Award Winner 1988

SPA

Nimbus, IBM £29 (+ VAT); Nimbus network, IBM site licence £79 (+ VAT).

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